Sound reduction index in accordance with PN - EN ISO 10140-2 (2011)

Laboratory measurements of airborne sound insulation of building elements

Client: **NorDan Sp. z o.o.** Measurement date: **05.11.2021**

Address: **Powodowo 54, 64-200 Wolsztyn**

Test specimen: **Wooden window** **Pi LNR: 100**

Construction: OD, ND NTech One Tilt and Turn

Frame thickness: 105 mm

Glazed by: 44.2 SR Foil / 10 Ar / 4 / 14 Ar / 66.2 SR Foil

Description of the test facility, test specimen and test arrangement:

Size of test specimen: **1230 x 1480 mm**

Test specimen mounted by: NorDan Sp. z o.o.

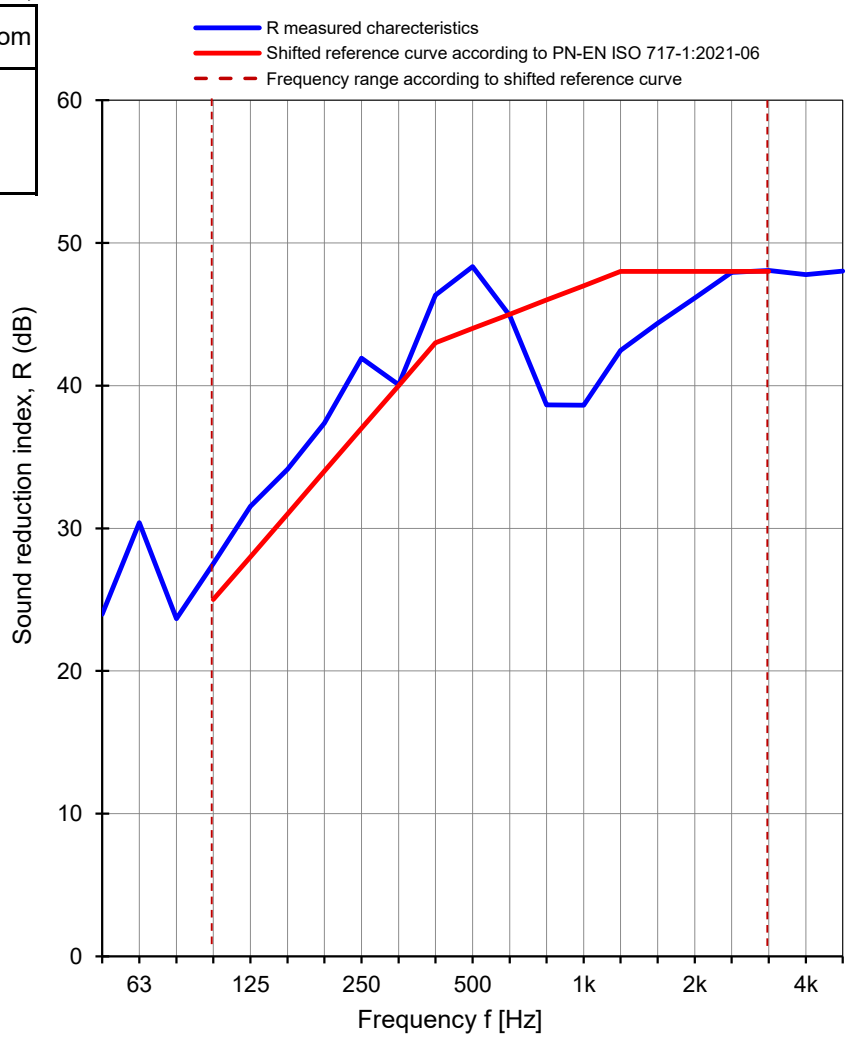
The surface area of test specimen: **1,87 m^2**

Parameter	Receiving room	Source room
Air temp. [°C]	21,0	21,0
Humidity [%]	56	56
Pressure [hPa]	1014	1014
Volume [m^3]	372	324

Frequency [Hz]	Test results with uncertainty R [dB]	U_{CR} [dB]
50	24,0	2,9
63	30,4	1,8
80	23,7	1,9
100	27,5	2,4
125	31,5	1,6
160	34,1	1,4
200	37,4	1,2
250	41,9	1,2
315	40,1	1,6
400	46,3	0,9
500	48,3	0,8
630	44,9	0,9
800	38,6	1,0
1000	38,6	1,0
1250	42,5	0,7
1600	44,4	0,7
2000	46,1	0,7
2500	47,9	0,8
3150	48,1	1,1
4000	47,8	1,0
5000	48,0	1,0

Measurement uncertainty of sound reduction U_{CR}

Confidence level 95% at coverage factor, k=2



Weighted sound reduction index in accordance with PN-EN ISO 717-1:2021-06

Rw (C; Ctr)= 44 (-2; -4) dB

$C_{50\text{-}3150}$= **-2** dB $C_{50\text{-}5000}$= **-1** dB $C_{100\text{-}5000}$= **-1** dB

$C_{tr,\ 50\text{-}3150}$= **-6** dB $C_{tr,\ 50\text{-}5000}$= **-6** dB $C_{tr,\ 100\text{-}5000}$= **-4** dB

Rw = 44,5 dB

GRYFITLAB Sp. z o.o. Laboratory of Acoustics

No. of test specimen: GLA-1559.49 / 21

Date: 05.11.2021 Signature: Robert Dybicz